

## Four New Intel® Desktop Boards Expand Options for Integrators

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### Overview

Intel has introduced four new desktop boards for integrators and developers seeking the flexibility to meet all price points with desktop systems based on the Intel® Pentium® 4 processor in the mPGA478 socket: the Intel® Desktop Boards D845HV, D845WN, D850MD, and D850MV. In a nutshell, the Desktop Boards D845HV and D845WN support the Intel® 845 chipset in the cost-effective microATX and highly versatile ATX form factors, respectively. The Desktop Boards D850MD and D850MV support the Intel® 850 chipset in the cost-effective microATX and highly versatile ATX form factors, respectively.

The Desktop Board D850MV (a direct follow-on to the widely used Intel® Desktop Board D850GB) also offers high-speed USB 2.0 ports. It's the industry's first desktop board to pass the USB Implementers Forum USB 2.0 Hi-Speed certification.

With the functionality and versatility of the Desktop Boards D845HV, D845WN, D850MD, and D850MV, integrators and developers can reduce time-to-market and development and support costs, and they can position themselves to deliver systems into a wide range of market segments.

### Rock-Solid Operation

Intel desktop boards have long been known for the solid foundation they offer in terms of stability, reliability, and easy installation. The Desktop Boards D845HV, D845WN, D850MD, and D850MV continue this legacy. For reliability, Intel® Active Monitor value-add software is designed to monitor temperature, voltage, and fan speed and alerts the user if thresholds are exceeded. For advanced power saving, a robust IAPC (Instantly Available PC) implementation supports easy jumper-free configuration, wake events from an assortment of devices, and system design that reduces energy usage by as much as 70 percent (source: EPA Media Alert 20-231).

Compatibility testing also enhances the stability and reliability of systems based on the Desktop Boards D845HV, D845WN, D850MD, and D850MV. Intel tests these boards for compatibility with more than 350 commercially available hardware, network, and software products, 100 widely used software applications, dozens of video and audio cards, CD-ROM drives, modems, USB devices, memory, and more. The boards are fully certified against FCC, UL, CE, and other international standards and were granted a WHQL (Windows Hardware Quality Labs) certification logo prior to launch.

Along with Intel's extensive testing and validation, every boxed Intel Desktop Board D845HV, D845WN, D850MD, and D850MV is backed by a three-year limited warranty and the world-class service and support Intel is known for worldwide.

## **Snap Integration**

For time-to-market and cost advantages, the Desktop Boards D845HV, D845WN, D850MD, and D850MV are designed specifically to expedite system assembly. All the boards are available in a choice of LAN or CNR configurations, with the LAN configuration supporting Intel® PRO/100 network connections. Intel desktop boards offer an exceptional software bundle, including Intel Active Monitor, Norton Internet Security\* 2000 Family Edition, NTI CD-Maker2000\*, SoundMax\* with SPX, RealJukebox\* Basic and RealPlayer\* Basic, as well as Intel's world-class BIOS with Intel® Rapid BIOS Boot; and Intel® Express BIOS Update.

Also included in the box is an I/O shield, retention mechanisms for the CPU heat sink and the AGP connector, board and back-panel I/O layout stickers, cables for IDE and floppy drives, and the Intel® Express Installer CD-ROM, which provides one-click installation of the value-add software described above, documentation, utilities, and software drivers. These drivers support master hard drive operating-system images for smooth system setup, eliminating the need for large, target-based executables.

## **Leading Technology**

In addition to stable and reliable operation and streamlined integration and assembly, the Desktop Boards D845HV, D845WN, D850MD, and D850MV offer integrators and developers a crucial competitive advantage through their support for some of the industry's most advanced technologies. By supporting the Intel Pentium 4 processor in the mPGA478 socket, the desktop boards enable standardized platforms and an easy future upgrade path. Support for processor speeds of 2 GHz and beyond give integrators and developers the freedom to offer high-end systems today and tomorrow—without having to retool for new boards.

Moreover, support for up to 3 GB of PC133 SDRAM in the Desktop Boards D845HV and D845WN and up to 2 GB of PC600 and PC800 dual-channel RDRAM in the Desktop Boards D850MD and D850MV enable integrators and developers to offer systems with the performance to handle the most demanding business and consumer applications.

On-the-board SoundMAX with SPX brings yet another competitive advantage to integrators and developers using the Desktop Boards D845HV, D845WN, D850MD, and D850MV. Available on Intel desktop boards exclusively until the end of 2001, SoundMAX with SPX provides audio features and functionality equivalent to premium PCI sound cards in a cost structure typical of traditional integrated audio solutions. Capabilities include Virtual Theater\* surround for multi-channel effects, and high-fidelity recording and playback of any audio format, including MP3, streaming audio, 3D multiplayer gaming, and Web conferencing. The SPX technology enables audio animation, which creates sounds in real time for incredible responsiveness and realism in gaming. Moreover, multi-channel upgrades are easy. While all the desktop boards currently ship with two-channel audio, CNR cards for four or six channel upgrades are widely available.

For plug-and-play connection of high-speed peripherals, the Desktop Boards D845HV, D845WN, D850MD, and D850MV support up to seven USB 1.1 ports. This enables integrators to optimize inventory on USB peripherals rather than having to stock both USB and PS/2\* mouse devices and keyboards. What's more, by positioning two of the ports on the front panel, the Desktop Boards D845HV, D845WN, D850MD, and D850MV enable integrators and developers to exploit newer chassis with built-in USB and audio connectors.

In addition, through its support for USB 2.0, the Desktop Board D850MV offers a substantial increase in transfer rates between PCs and peripherals: up to 480 Mbps, a 40-fold improvement over the transfer rate of a USB 1.1 device. This enables integrators and developers to bring their customers the premium performance that's essential in digital video, cameras, scanners, printers, hard drives, CD-ROMs, DVD players, and other next-generation products. In addition to the increased speed of USB 2.0 ports, each port is also backward compatible with existing USB 1.1 peripherals, providing an easy transition to USB 2.0 systems.

Integrators and developers basing desktop systems on the Desktop Boards D845HV, D845WN, D850MD, and D850MV have still another advantage with the support of these boards for the Windows XP\* operating system. This is thanks to rigorous compatibility testing, Windows XP-specific drivers that interact directly with the board, and WHQL Certification for hardware and drivers.

## Summary

The rock solid foundation, streamlined integration, and leading technology offered by the Intel Desktop Boards D845HV, D845WN, D850MD, and D850MV make these boards a clear choice for integrators and developers seeking a competitive advantage in building desktop systems to satisfy a broad range of market segments—from mainstream to high end—at all price points.

All products, dates, and figures specified are preliminary based on current expectations, provided for planning purposes only, and are subject to change without notice. Availability in different channels may vary.

## More Info

For more information on the Intel Desktop Boards D845HV, D845WN, D850MD, and D850MV, go to the [Intel® Desktop Boards section](#) of the Intel® Developer Site. To locate the page, go to the Products area of the Developer Site, then to the Intel® Architecture tab, where you can access the Desktop Boards section.

You can also contact the authors of this article, [Christine McMonigal](#) and [Jeff Bake](#) via e-mail.

## Author Bios

Christine McMonigal is a senior product marketing engineer in Intel Desktop Platform Solutions Division, where she defines features for new desktop boards and markets them to customers. She has eight years of experience in the computing industry as well as an M.B.A. from Cornell University. Before joining Intel in 2000, she was the reseller marketing manager for a manufacturer of networking and communications hardware.

Jeff Bake joined Intel in 1999 as a product marketing engineer for DPSD Marketing. Before joining Intel, Jeff worked with an Internet start-up company that provided services and support to physicians and pharmaceutical companies via the Internet. He also led market analysis efforts for a management consulting firm, and has developed and marketed practice management system software for a leading healthcare information systems company. Jeff earned his M.B.A. from Portland State University.

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